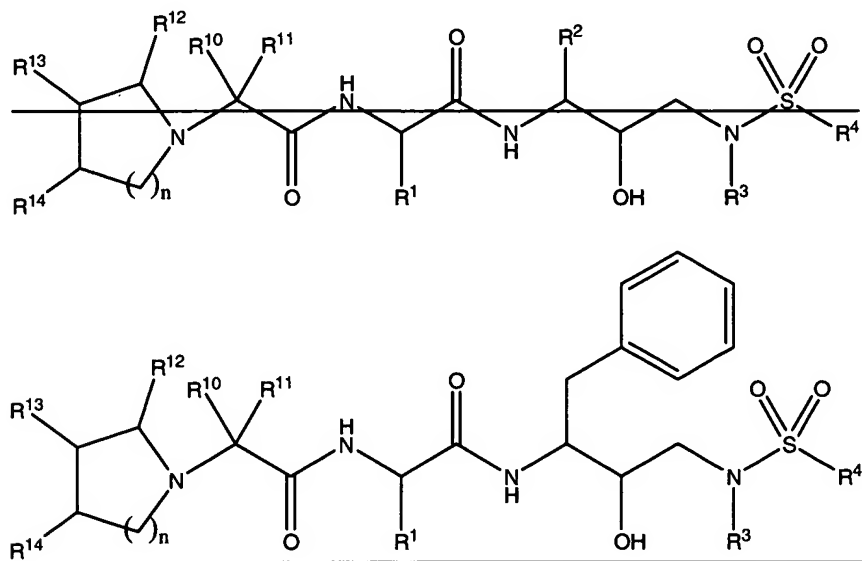


This Listing of Claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claim 1 (currently amended): A compound represented by the formula:



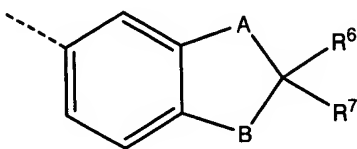
or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein n represents 1 or 2;

R¹ represents alkyl of 1-5 carbon atoms, alkenyl of 2-5 carbon atoms, alkynyl of 2-5 carbon atoms, hydroxyalkyl of 1-3 carbon atoms, alkoxyalkyl of 1-3 alkyl and 1-3 alkoxy carbon atoms, cyanoalkyl of 1-3 alkyl carbon atoms, imidazolylmethyl, -CH₂CONH₂, -CH₂CH₂CONH₂, -CH₂S(O)₂NH₂, -CH₂SCH₃, -CH₂S(O)CH₃, -CH₂S(O)₂CH₃, -C(CH₃)₂SCH₃, -C(CH₃)₂S(O)CH₃ or -C(CH₃)₂S(O)₂CH₃ radicals;

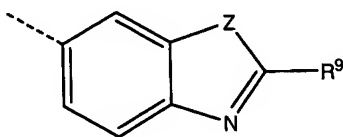
~~R² represents radicals of alkyl of 1-5 carbon atoms, aralkyl of 1-3 alkyl carbon atoms, alkylthioalkyl of 1-3 alkyl carbon atoms, arylthioalkyl of 1-3 alkyl carbon atoms or cycloalkylalkyl of 1-3 alkyl carbon atoms and 3-6 ring member carbon atoms;~~

R³ represents radicals of alkyl radical of 1-5 carbon atoms, cycloalkyl of 5-8 ring members or cycloalkylmethyl radical of 3-6 ring members;

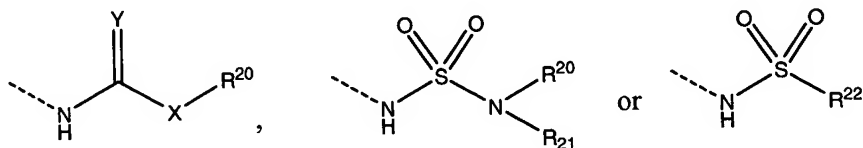
R⁴ represents aryl, benzo fused 5 to 6 ring member heteroaryl or benzo fused 5 to 6 ring member heterocyclo radicals; or a radical of the formula:



wherein A and B each independently represent O, S, SO or SO₂; R⁶ represents deuterium, alkyl of 1-5 carbon atoms, fluoro or chloro radicals; R⁷ represents hydrogen, deuterium, methyl, fluoro or chloro radicals; or a radical of the formula:



wherein Z represents O, S or NH; and R⁹ represents a radical of formula:



wherein Y represents O, S or NH; X represents a bond, O or NR²¹;

R²⁰ represents hydrogen, alkyl of 1 to 5 carbon atoms, alkenyl of 2 to 5 carbon atoms, alkynyl of 2 to 5 carbon atoms, aralkyl of 1 to 5 alkyl carbon atoms, heteroaralkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, heterocycloalkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, aminoalkyl of 2 to 5 carbon atoms, N-mono-substituted or N,N-disubstituted aminoalkyl of 2 to 5 alkyl carbon atoms wherein said substituents are radicals of alkyl of 1 to 3 carbon atoms, aralkyl of 1 to 3 alkyl carbon atoms radicals, carboxyalkyl of 1 to 5 carbon atoms, alkoxycarbonylalkyl of 1 to 5 alkyl carbon atoms, cyanoalkyl of 1 to 5 carbon atoms or hydroxyalkyl of 2 to 5 carbon atoms;

R²¹ represents hydrogen radical or alkyl radical of 1 to 3 carbon atoms; or the radical of formula $-NR^{20}R^{21}$ represents a 5 to 6 ring member heterocyclo radical; and

R²² represents alkyl radical of 1 to 3 carbon atoms or R²⁰R²¹N-alkyl radical of 1 to 3 alkyl carbon atoms;

R¹⁰ represents hydrogen, alkyl, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms;

R¹¹ represents hydrogen, alkyl of 1-5 carbon atoms, hydroxyalkyl of 1-4 carbon atoms, alkoxyalkyl of 1-3 alkyl carbon atoms, benzyl, imidazolylmethyl, $-\text{CH}_2\text{CH}_2\text{CONH}_2$, $-\text{CH}_2\text{CONH}_2$, $-\text{CH}_2\text{CH}_2\text{SCH}_3$ or $-\text{CH}_2\text{SCH}_3$ radicals or the sulfone or sulfoxide derivatives thereof;

R¹² represents hydrogen, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms; and

R¹³ and R¹⁴ each independently represent hydrogen, hydroxy, alkoxy, 2-hydroxyethoxy, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms; or R¹² and R¹³ or R¹³ and R¹⁴ along with the carbon atoms to which they are attached represent 5-6 ring membered heteroaryl or benzo radical, each of which is optionally substituted with at least one hydroxy or alkoxy radical of 1-3 carbon atoms.

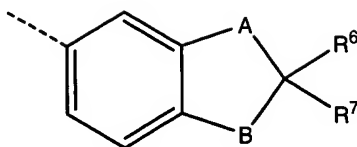
Claim 2 (currently amended): ~~The~~ Ecompound of Claim 1, or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein

R¹ represents alkyl of 1-4 carbon atoms, alkenyl of 2-3 carbon atoms, alkynyl of 3-4 carbon atoms, cyanomethyl, imidazolylmethyl, -CH₂CONH₂, -CH₂CH₂CONH₂, -CH₂S(O)₂NH₂, -CH₂SCH₃, -CH₂S(O)CH₃, -CH₂S(O)₂CH₃, -C(CH₃)₂SCH₃, -C(CH₃)₂S(O)CH₃ or -C(CH₃)₂S(O)₂CH₃ radicals; ~~and~~

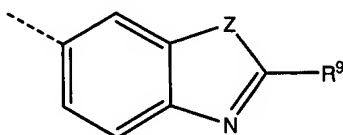
~~R² represents radicals of alkyl of 3-5 carbon atoms, arylmethyl, alkylthioalkyl of 1-3 alkyl carbon atoms, arylthiomethyl or cycloalkylmethyl of 5-6 ring member carbon atoms radicals;~~

R³ represents alkyl of 1-5 carbon atoms, cycloalkylmethyl of 3-6 ring members, cyclohexyl or cycloheptyl radicals;

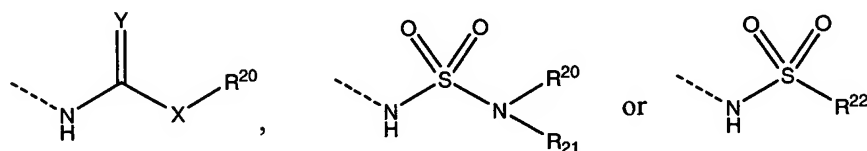
R⁴ represents phenyl, 2-naphthyl, 4-methoxyphenyl, 4-hydroxyphenyl, 3,4-dimethoxyphenyl, 3-aminophenyl, 4-aminophenyl, 2-amino-benzothiazol-5-yl, 2-amino-benzothiazol-6-yl, benzothiazol-5-yl, benzothiazol-6-yl, benzoxazol-5-yl, 2,3-dihydrobenzofuran-5-yl, benzofuran-5-yl, 1,3-benzodioxol-5-yl or 1,4-benzodioxan-6-yl radicals; or a radical of the formula:



wherein A and B each represent O; R^6 represents deuterium, methyl, ethyl, propyl, isopropyl or fluoro radicals; and R^7 represents hydrogen, deuterium, methyl or fluoro radicals; or a radical of the formula:



wherein Z represents O, S or NH; and R^9 represents a radical of formula:



wherein Y represents O, S or NH; X represents a bond, O or NR^{21} ;

R^{20} represents hydrogen, alkyl of 1 to 5 carbon atoms, phenylalkyl of 1 to 3 alkyl carbon atoms, heterocycloalkyl of 5 to 6 ring members and 1 to 3 alkyl carbon atoms, or N-mono-substituted or N,N-disubstituted aminoalkyl of 2 to 3 alkyl carbon atoms wherein said substituents are alkyl radicals of 1 to 3 carbon atoms; and

R²¹ represents hydrogen or methyl radicals; or the radical of formula $-NR^{20}R^{21}$ represents pyrrolidinyl, piperidinyl, piperazinyl, 4-methylpiperazinyl, 4-benzylpiperazinyl, morpholinyl or thiamorpholinyl radicals; and

R²² represents alkyl radical of 1 to 3 carbon atoms.

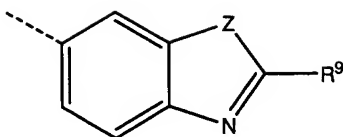
Claim 3 (currently amended): The ~~E~~compound of Claim 2, or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein

R¹ represents iso-propyl, sec-butyl, tert-butyl, 3-propynyl, imidazolylmethyl, $-\text{CH}_2\text{CONH}_2$, $-\text{CH}_2\text{SCH}_3$, $-\text{CH}_2\text{S(O)CH}_3$, $-\text{CH}_2\text{S(O)}_2\text{CH}_3$, $-\text{C(CH}_3)_2\text{SCH}_3$, $-\text{C(CH}_3)_2\text{S(O)CH}_3$ or $-\text{C(CH}_3)_2\text{S(O)}_2\text{CH}_3$ radicals;

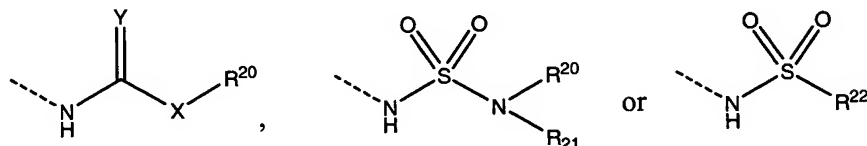
~~R² represents isobutyl, n-butyl, $\text{CH}_3\text{SCH}_2\text{CH}_2$, phenylthiomethyl, (2-naphthylthio)methyl, benzyl, 4-methoxyphenylmethyl, 4-hydroxyphenylmethyl, 4-fluorophenylmethyl or cyclohexylmethyl radicals;~~

R³ represents propyl, isoamyl, isobutyl, butyl, cyclohexyl, cycloheptyl, cyclopentylmethyl or cyclohexylmethyl radicals;

R⁴ represents phenyl, 2-naphthyl, 4-methoxyphenyl, 4-hydroxyphenyl, benzothiazol-5-yl, benzothiazol-6-yl, benzoxazol-5-yl, 2,3-dihydrobenzofuran-5-yl, benzofuran-5-yl, 1,3-benzodioxol-5-yl, 2-methyl-1,3-benzodioxol-5-yl, 2,2-dimethyl-1,3-benzodioxol-5-yl, 2,2-dideutero-1,3-benzodioxol-5-yl, 2,2-difluoro-1,3-benzodioxol-5-yl or 1,4-benzodioxan-6-yl radicals; or a radical of the formula:



wherein Z represents O, S or NH; and R⁹ represents a radical of formula:



wherein Y represents O, S or NH; X represents a bond, O or NR²¹;

R²⁰ represents hydrogen, methyl, ethyl, propyl, isopropyl, isobutyl, benzyl, 2-(1-pyrrolidinyl)ethyl, 2-(1-piperidinyl)ethyl, 2-(1-piperazinyl)ethyl, 2-(4-methylpiperazin-1-yl)ethyl, 2-(1-morpholinyl)ethyl, 2-(1-thiomorpholinyl)ethyl or 2- (N,N-dimethylamino) ethyl radicals;

R²¹ represents a hydrogen radical; and

R²² represents methyl radical;

R¹⁰ and R¹² each represent a hydrogen radical;

R¹¹ represents hydrogen, methyl, isopropyl, butyl, secbutyl, isobutyl, hydroxymethyl or hydroxyethyl radicals; and

R^{13} and R^{14} each independently represent hydrogen, hydroxy, methoxy or ethoxy radicals; or R^{12} and R^{13} or R^{13} and R^{14} along with the carbon atoms to which they are attached represent benzo radical, which is optionally substituted with at least one hydroxy or methoxy radical.

Claim 4 (currently amended): The ~~E~~compound of Claim 3 or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein n represents 1;

R^1 represents sec-butyl, tert-butyl, iso-propyl, 3-propynyl or $-C(CH_3)_2S(O)_2CH_3$ radicals;

~~R^2 represents benzyl, 4-fluorophenylmethyl or cyclohexylmethyl radicals;~~

R^4 represents phenyl, 4-methoxyphenyl, 4-hydroxyphenyl, benzothiazol-5-yl, benzothiazol-6-yl, 2,3-dihydrobenzofuran-5-yl, benzofuran-5-yl, 1,3-benzodioxol-5-yl, 2-methyl-1,3-benzodioxol-5-yl, 2,2-dimethyl-1,3-benzodioxol-5-yl, 2,2-dideutero-1,3-benzodioxol-5-yl, 2,2-difluoro-1,3-benzodioxol-5-yl, 1,4-benzodioxan-6-yl, 2-(methoxycarbonylamino)benzothiazol-6-yl or 2-(methoxycarbonylamino)benzimidazol-5-yl radicals;

R^{11} represents a hydrogen radical; and

R^{13} and R^{14} each independently represent hydrogen, hydroxy, methoxy or ethoxy radicals.

Claim 5 (currently amended): The ~~E~~compound of Claim 1 wherein said pharmaceutically acceptable salt is hydrochloric acid salt, sulphuric acid salt, phosphoric acid salt, oxalic acid salt, maleic acid salt, succinic acid salt, citric acid salt or methanesulfonic acid salt.

Claim 6 (currently amended): ~~The~~ ~~E~~compound of Claim 5 wherein said pharmaceutically acceptable salt is hydrochloric acid salt, oxalic acid salt, citric acid salt or methanesulfonic acid salt.

Claim 7 (canceled)

Claim 8 (currently amended): ~~A~~ ~~E~~composition comprising ~~a~~ the compound of Claim 1 and a pharmaceutically acceptable carrier.

Claim 9 (currently amended): ~~A~~ ~~M~~method of inhibiting a retroviral protease comprising administering an effective amount of ~~a~~ the compound of Claim 1.

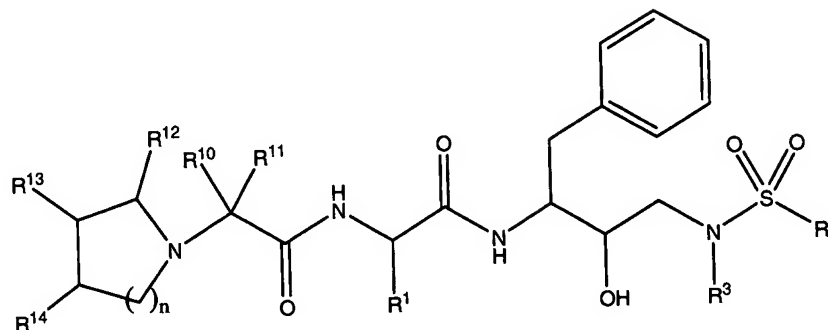
Claim 10 (currently amended): ~~A~~ ~~M~~method of treating a retroviral infection comprising administering an effective amount of ~~a~~ the composition of Claim 8.

Claim 11 (currently amended): ~~A~~ ~~M~~method of inhibiting replication of a retrovirus comprising administering an effective amount of ~~a~~ the compound of Claim 1.

Claim 12 (currently amended): ~~A~~ ~~M~~method of preventing replication of a retrovirus *in vitro* comprising administering an effective amount of ~~a~~ the compound of Claim 1.

Claim 13 (currently amended): ~~A~~ ~~M~~method of treating AIDS comprising administering an effective amount of ~~a~~ the composition of Claim 8.

Claim 14 (new): A compound represented by the formula:

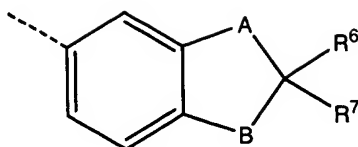


or a pharmaceutically acceptable salt, prodrug or ester thereof wherein n represents 1 or 2;

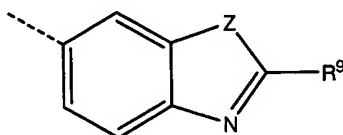
R¹ represents alkyl of 1-5 carbon atoms, alkenyl of 2-5 carbon atoms, alkynyl of 2-5 carbon atoms, hydroxyalkyl of 1-3 carbon atoms, alkoxyalkyl of 1-3 alkyl and 1-3 alkoxy carbon atoms, cyanoalkyl of 1-3 alkyl carbon atoms, imidazolylmethyl, -CH₂CONH₂, -CH₂CH₂CONH₂, -CH₂S(O)₂NH₂, -CH₂SCH₃, -CH₂S(O)CH₃, -CH₂S(O)₂CH₃, -C(CH₃)₂SCH₃, -C(CH₃)₂S(O)CH₃ or -C(CH₃)₂S(O)₂CH₃ radicals;

R³ represents radicals of alkyl radical of 1-5 carbon atoms, cycloalkyl of 5-8 ring members or cycloalkylmethyl radical of 3-6 ring members;

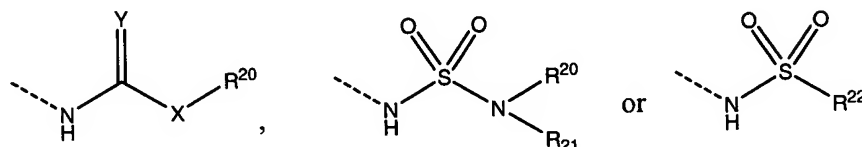
R⁴ represents an aryl bonded to the sulfur atom through a carbon atom, a benzo fused 5 to 6 member heteroaryl bonded to the sulfur atom through a carbon atom; a benzo fused 5 to 6 ring member heterocyclo bonded to the sulfur atom through a carbon atom; a radical of the formula:



wherein A and B each independently represent O, S, SO or SO₂; R⁶ represents deuterium, alkyl of 1-5 carbon atoms, fluoro or chloro radicals; R⁷ represents hydrogen, deuterium, methyl, fluoro or chloro radicals; or a radical of the formula:



wherein Z represents O, S or NH; and R⁹ represents a radical of formula:



wherein Y represents O, S or NH; X represents a bond, O or NR²¹; R²⁰ represents hydrogen, alkyl of 1 to 5 carbon atoms, alkenyl of 2 to 5 carbon atoms, alkynyl of 2 to 5 carbon atoms, aralkyl of 1 to 5 alkyl carbon atoms, heteroaralkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, heterocycloalkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, aminoalkyl of 2 to 5 carbon atoms, N-mono-substituted or N,N-disubstituted aminoalkyl of 2 to 5 alkyl carbon atoms wherein said substituents are radicals of alkyl of 1 to 3 carbon atoms, aralkyl of 1 to 3 alkyl carbon atoms radicals, carboxyalkyl of 1 to 5 carbon atoms, alkoxycarbonylalkyl of 1 to 5 alkyl carbon atoms, cyanoalkyl of 1 to 5 carbon atoms or hydroxyalkyl of 2 to 5 carbon atoms;

R^{21} represents hydrogen radical or alkyl radical of 1 to 3 carbon atoms; or the radical of formula $-NR^{20}R^{21}$ represents a 5 to 6 ring member heterocyclo radical; and

R^{22} represents alkyl radical of 1 to 3 carbon atoms or $R^{20}R^{21}N$ -alkyl radical of 1 to 3 alkyl carbon atoms;

R^{10} represents hydrogen, alkyl, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms;

R^{11} represents hydrogen, alkyl of 1-5 carbon atoms, hydroxyalkyl of 1-4 carbon atoms, alkoxyalkyl of 1-3 alkyl carbon atoms, benzyl, imidazolylmethyl, $-\text{CH}_2\text{CH}_2\text{CONH}_2$, $-\text{CH}_2\text{CONH}_2$, $-\text{CH}_2\text{CH}_2\text{SCH}_3$ or $-\text{CH}_2\text{SCH}_3$ radicals or the sulfone or sulfoxide derivatives thereof;

R^{12} represents hydrogen, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms; and

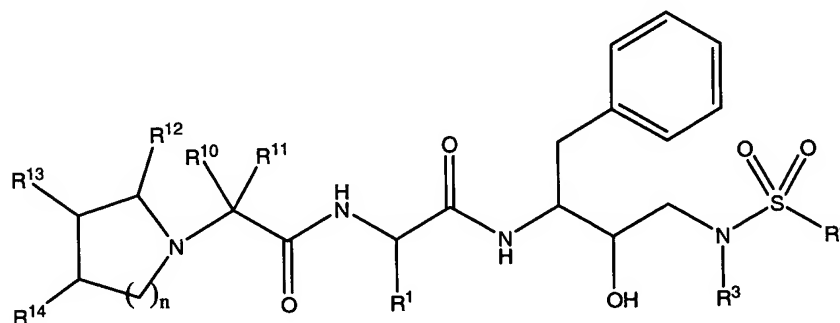
R^{13} and R^{14} each independently represent hydrogen, hydroxy, alkoxy, 2-hydroxyethoxy, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms; or R^{12} and R^{13} or R^{13} and R^{14} along with the carbon atoms to which they are attached represent 5-6 ring membered heteroaryl or benzo radical, each of which is optionally substituted with at least one hydroxy or alkoxy radical of 1-3 carbon atoms.

Claim 15 (new): A composition comprising the compound of Claim 14 and a pharmaceutically acceptable carrier.

Claim 16 (new): A method of treating a retroviral infection comprising administering an effective amount of the composition of Claim 15.

Claim 17 (new): A method of treating AIDS comprising administering an effective amount of the composition of Claim 15.

Claim 18 (new): A compound represented by the formula:

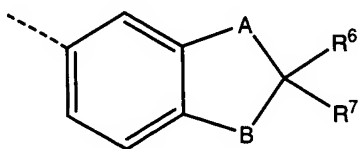


or a pharmaceutically acceptable salt, prodrug or ester thereof wherein n represents 1 or 2;

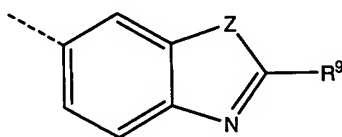
R¹ represents alkyl of 1-5 carbon atoms, alkenyl of 2-5 carbon atoms, alkynyl of 2-5 carbon atoms, hydroxyalkyl of 1-3 carbon atoms, alkoxyalkyl of 1-3 alkyl and 1-3 alkoxy carbon atoms, cyanoalkyl of 1-3 alkyl carbon atoms, imidazolylmethyl, -CH₂CONH₂, -CH₂CH₂CONH₂, -CH₂S(O)₂NH₂, -CH₂SCH₃, -CH₂S(O)CH₃, -CH₂S(O)₂CH₃, -C(CH₃)₂SCH₃, -C(CH₃)₂S(O)CH₃ or -C(CH₃)₂S(O)₂CH₃ radicals;

R³ represents radicals of alkyl radical of 1-5 carbon atoms, cycloalkyl of 5-8 ring members or cycloalkylmethyl radical of 3-6 ring members;

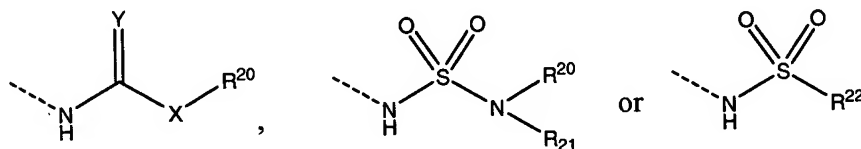
R⁴ represents a benzo fused 5 to 6 ring member heteroaryl bonded to the sulfur atom through a carbon atom; a benzo fused 5 to 6 ring member heterocyclo bonded to the sulfur atom through a carbon atom; a radical of the formula:



wherein A and B each independently represent O, S, SO or SO₂; R⁶ represents deuterium, alkyl of 1-5 carbon atoms, fluoro or chloro radicals; R⁷ represents hydrogen, deuterium, methyl, fluoro or chloro radicals; or a radical of the formula:



wherein Z represents O, S or NH; and R⁹ represents a radical of formula:



wherein Y represents O, S or NH; X represents a bond, O or NR²¹; R²⁰ represents hydrogen, alkyl of 1 to 5 carbon atoms, alkenyl of 2 to 5 carbon atoms, alkynyl of 2 to 5 carbon atoms, aralkyl of 1 to 5 alkyl carbon atoms, heteroaralkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, heterocycloalkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, aminoalkyl of 2 to 5 carbon atoms, N-mono-substituted or N,N-disubstituted aminoalkyl of 2

to 5 alkyl carbon atoms wherein said substituents are radicals of alkyl of 1 to 3 carbon atoms, aralkyl of 1 to 3 alkyl carbon atoms radicals, carboxyalkyl of 1 to 5 carbon atoms, alkoxyacetylalkyl of 1 to 5 alkyl carbon atoms, cyanoalkyl of 1 to 5 carbon atoms or hydroxyalkyl of 2 to 5 carbon atoms;

R²¹ represents hydrogen radical or alkyl radical of 1 to 3 carbon atoms; or the radical of formula -NR²⁰R²¹ represents a 5 to 6 ring member heterocyclo radical; and

R²² represents alkyl radical of 1 to 3 carbon atoms or R²⁰R²¹N-alkyl radical of 1 to 3 alkyl carbon atoms;

R¹⁰ represents hydrogen, alkyl, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms;

R¹¹ represents hydrogen, alkyl of 1-5 carbon atoms, hydroxyalkyl of 1-4 carbon atoms, alkoxyalkyl of 1-3 alkyl carbon atoms, benzyl, imidazolylmethyl, -CH₂CH₂CONH₂, -CH₂CONH₂, -CH₂CH₂SCH₃ or -CH₂SCH₃ radicals or the sulfone or sulfoxide derivatives thereof;

R¹² represents hydrogen, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms; and

R¹³ and R¹⁴ each independently represent hydrogen, hydroxy, alkoxy, 2-hydroxyethoxy, hydroxyalkyl or alkoxyalkyl radicals, wherein alkyl is 1-3 carbon atoms; or R¹² and R¹³ or R¹³ and R¹⁴ along with the carbon atoms to which they are attached represent 5-6 ring membered heteroaryl or benzo radical, each of which is optionally substituted with at least one hydroxy or alkoxy radical of 1-3 carbon atoms.

Claim 19 (new): A composition comprising the compound of Claim 18 and a pharmaceutically acceptable carrier.

Claim 20 (new): A method of treating a retroviral infection comprising administering an effective amount of the composition of Claim 19.

Claim 21 (new): A method of treating AIDS comprising administering an effective amount of the composition of Claim 19.